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ABSTRACT

Computer routines to edit input data for the Southwest Regional Laboratory's (SWRL) Financial System are described. The program is responsible for validating input records, generating records for further system processing, and updating the Vendor Master File--a file containing the information necessary to support the accounts payable and receivable routines in the Financial System. The specific editing requirements are presented, and the relationship between data elements and the System's output reports are shown. (Author/DGC)

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SWRL SOUTHWEST REGIONAL LABORATORY
TECHNICAL NOTE

DATE: April 7, 1972

NO: TN 5-72-18

TITLE: PROGRAM DESCRIPTION: EDIT PROGRAM AND VENDOR MASTER UPDATE - SWRL FINANCIAL SYSTEM

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ABSTRACT

The EDIT Program is part of the SWRL Financial System. The program is responsible for validating input records, generating records for further system processing, and updating the Vendor Master File. This document describes the specific editing requirements, and shows the relationship between data elements and reports.

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PROGRAM DESCRIPTION: EDIT PROGRAM AND VENDOR
MASTER UPDATE - SWRL FINANCIAL SYSTEM

This program* is written in American National Standard COBOL (ANS COBOL) incorporating the SORT verb feature of this language. The SORT program is a member of the IBM System/360 Operating System and functions under the supervisory control of the operating system conventions. Any data sets used by the program must be defined according to current operating systems standards. In using the SORT verb feature of COBOL, the SORT is executed in three phases. During Phase I (Input Procedure), as each record is checked and accepted for validity, the record is released to the SORT to be sequenced in a prescribed order. In Phase II (Intermediate Merge Phase), the SORT has control of the system and the COBOL program cannot interrupt during this phase of execution. The SORT performs successive merges of strings (records in sequential order) until a final merge (to create one long string) is achieved. Then in Phase III the records are in their prescribed sequence. The user's written COBOL program and the SORT will begin an interfacing operation in which each of the sorted records will be returned to the COBOL program for further processing.

PHASE I: INPUT PROCEDURE

During Phase I of the SORT, the following checks for each type of transaction record are required:

1. Transaction Record Editing

   a. Column 1 = must be a "T"

   b. Columns 2-3 = must be 01, 02, 03, 04, 05, 07, 08, 09

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*See TN 5-72-16 for an overview of the SWRL Financial System.

c. Column 4 = blank

d. Columns 5-19 = (Control Field)

1) Year 5-6 = must be numeric.

2) Contract 7-10 = must be numeric.

3) Fund 11-13 = blank or numeric.

4) Acct. Class or Cost Center 14-16.

-- Column 14 must be A, E, L, U, R, O

with columns 15-16 blank or

Columns 14-16 must be numeric

5) Acct. Number 17-19 = must be numeric.

e. Columns 20-30 (Amount Field)

-- Column 20 has a plus (+) or minus (-) sign.

If sign is minus (-), subtract amount (columns 21-30) from ZERO, and place value in columns 21-30. If sign is positive (+), add amount (Columns 21-30) to ZERO, and place value in columns 20-30. This puts the sign in the low order position of the amount field (columns 20-30). NOTE: BE SURE TO CHECK COLUMNS 21-30 ARE NUMERIC BEFORE ANY ARITHMETIC IS PERFORMED.

f. Columns 31-80

-- Transaction Inputs 01, 02, 03, 04, 05, 06, 07 must be blank from 31-80.

-- Transaction Input 08 is edited as follows:

1) Columns 31-36 = Vendor Number = must be numeric. Also, a check digit calculation of the Vendor Number must be made.

2) Columns 37-42 = Invoice Date = must be numeric.

3) Columns 43-52 = Can either be blank or contain data.

4) Columns 53-58 = Check Date = must be numeric.

5) Columns 59-64 = Check Number = must be numeric.

6) Columns 65-70 = P.O. Number or Encumbrance Number= either blank or contains data.

7) Columns 71-73 = must be blank or numeric.

8) Columns 74-80 = must be blank.

-- Transaction Input 09 is edited as follows:

1) Columns 31-36 = Vendor Number = must be numeric. Also, a check digit calculation of the Vendor Number must be made.

2) Columns 37-52 = must be blank.

3) Columns 53-58 = P.O. or Encumbrance Date = must be present.

4) Columns 59-64 = must be blank.

5) Columns 65-70 = must contain data.

6) Columns 71-73 = must be blank or numeric.

7) Columns 74-80 = must be blank.

2. Other editing requirements are:

   -- If purchase order number begins with a P, the cost must go to account number 572.

   -- If the account number is 572, the cost is charged to cost center 403 only.

   -- If the account numbers are 551, 574, the cost is charged to cost center 406 only.

   -- If the account numbers are 541, 542, 546, or 571, the cost is charged to cost center 900 only.

3. Special Input Records

   a. Column 1= must be an "S".

   b. Columns 2-3 = must be 01, 02, 03, 04, 05, 07, 08.

   c. Column 4 = must be C = change, or D = delete, or N = new.

   d. Columns 5 thru 80 as follows:

      1) Special Rec. 01 = SWRL Header

         = Columns 5-10 must be numeric.

         = Columns 11-30 must be blank.

         = Columns 31-36 = Reporting Date = must be numeric.

         = Columns 37-39 = G & A Pct. = must be numeric.

         = Columns 40-80 = must be blank.

2) Special Rec. 02 = General Ledger change.

= Columns 5-6 = must be numeric.

= Columns 7-10 = Contract = must be numeric.

= Columns 11-13 = either blank or numeric.

= Columns 14-16 = Cost Center = must be blank.

= Columns 17-19 = Account Number = must be numeric.

= Columns 20-50 = must be blank.

= Columns 51-80 = if trans code is a D, it must be blank. If trans code is C or N it must contain data.

3) Special Rec. 03 and 04 = Division Header and Cost Center Header.

= Columns 5-6 = Year = must be numeric.

= Columns 7-10 = Contract = must be numeric.

= Columns 11-13 = either numeric or blank.

= Columns 14-16 = Division or Cost Center = must be numeric.

= Columns 17-30 = must be blank.

= Columns 31-36 = Report Number = (same condition as columns 51-80 below)

= Columns 37-50 = must be blank.

= Columns 51-80 = Division or Cost Center Name.

If trans code is a D = must be blank. If trans code is a C, it can either be blank or contain data. If trans code is an N, it must contain data.

4) Special Rec. 05 = Cost Center Change.

= Columns 5-6 = Year = must be numeric.

= Columns 7-10 = Contract = must be numeric.

= Columns 11-13 = Fund = must be either numeric or blank.

= Columns 14-16 = Cost Center = must be numeric.

= Columns 17-19 = Account Number = must be numeric.

= Columns 20-30 = Account Field = Column 20 must contain either a plus (+) or a minus (-) sign.

= Columns 31-80 = must be blank.

5) Special Rec. 07 = Vendor Record 1.

= Columns 5-10 = Vendor Number = must be numeric. Also a check digit calculation is required.

= Columns 11-20 = must be blank.

= Columns 21-50 = Vendor Name 1 =

If trans code is N, data must be present.

If trans code is C, it can be either blank or contain data.

If trans code is D, it must be blank.

= Columns 51-80 = Vendor Name 2 =

If trans code is C or N it can either be blank or contain data.

If trans code is D, it must be blank.

6) Special Rec. 08 = Vendor Record 2

= Columns 5-10 = Vendor Number = must be numeric. Also a check digit calculation is required.

= Columns 21-50 = Vendor Address=

If trans code is N, it must contain data.

If trans code is C, it can be either blank or contain data. There will be NO trans code D for this record. If a Vendor Number is deleted, the Special 07 Record will be the only one required.

= Columns 51-71 = Vendor City =

If trans code is N, it must contain data.

If trans code is C, it can either be blank or contain data.

= Columns 76-80 = Vendor Zip Code =

If trans code is N, it must contain data.

If trans code is C, it can either be blank or contain data.

4. After each record is edited and is a valid record, it is expanded to 155 characters. There is no change in the field format of the first 80 positions (the input card) except for the following types of record:

a. Transaction Input

1) Trans Rec. 08 & 09 = move Vendor Number to position 81-88.

2) Move columns 1-4 of these records to positions 89-92.

3) All other Transaction Records require no changes except for the expansion.

b. Special Input

1) Special Input Rec. 07 & 08 = move Vendor Number to positions 81-88.

2) Move columns 1-4 of these records to positions 89-92.

3) All other Special Records require no changes except for the expansion.

5. The sort field is in position 81-92. All records except Trans Records 08 & 09 and Special Records 07 & 08 will be blank in this field. Therefore, when the program goes into Phase 3 of the Sort, all records containing blanks will be first, followed by the Vendor Information Records.

PHASE II: INTERMEDIATE MERGE PHASE

During Phase 2 of the Sort, the SORT program is sorting the records in a prescribed sequence.

PHASE III: OUTPUT PROCEDURE

During Phase 3 of the Sort, each record will be used to generate additional records. In addition to this, a sort-control field for each of the generated records is required. The sort control field will be developed in positions 131 to 155 of the record. Each type of input record can be identified to three or more of the reports created by the system. Therefore, a record will be generated for each report in which that record is used. When the Vendor Information Records are encountered, the Vendor Master File is updated. Special Input Records 07 and 08 are the only records which update the Vendor Master File. These records will add, change, or delete the Vendor Records. Transaction Records 08 and 09 will retrieve the Vendor Name 1 (positions 11-40) from its corresponding Vendor Number in the Master File and move this information to positions 101 to 130. The generation of records and development of the sort-control field will also be required for all Vendor Information Records.

The generation of each type of record to its applicable report is as follows:

1. Transaction Input

   a. Cash Receipts = T01 Rec.

      1) Transaction Input = Report 01

      2) General Ledger = Report 02

      3) General Ledger Trans = Report 03

      4) Management Reports = Report 04

      NOTE: For Management Reports, if the Cost Center field (Columns 14-16) is not numeric and the high order position of that field contains A, E, L, U, R, O, no record is generated to this report.

   b. Case Disbursements = T02 Rec. = same as cash receipts.

   c. Sales or Source of Revenue = T03 Rec. = same as cash receipts.

   d. Payroll Distribution = T04 Rec. = same as cash receipts.

   e. Journal Entries = T05 Rec. = same as cash receipts.

   f. Adjusting Journal Entries = T06 Rec. = same as cash receipts.

   g. Reproduction Service Allocation =T07 Rec. = same as cash receipts.

   h. Check Input = T08 Rec. = same as cash receipts except the following additional records must be generated:

      1) Payable Input = Report 05

      2) Payable Cost Distribution = Report 06

      3) Payable Account Distribution = Report 07

      4) Payable Payment = Report 08

      5) Open Y-T-D Commitment = Report 09

   i. Obligations and Encumbrances = T09 Rec. = same as cash receipts except that the following additional record must be generated:

      Open Y-T-D Commitment = Report 09

2. Special Input

   a. SWRL Header = S01 Rec.

      1) Transaction Input = Report 01

      2) Management Reports = Report 04

   b. General Ledger Change = S02 Rec.

      1) Transaction Input = Report 01

      2) General Ledger = Report 02

   c. Division Header = S03 Rec.

      1) Transaction Input = Report 01

      2) Management Report = Report 04

   d. Cost Center Header = S04 Rec.

      1) Transaction Input = Report 01

      2) Management Report = Report 04

   e. Cost Center Change = S05 Rec.

      1) Transaction Input = Report 01

      2) Management Report = Report 04

   f. Vendor Record 1 = S07 Rec.

      Transaction Input = Report 01

   g. Vendor Record 2 = S08 Rec.

      Transaction Input = Report 01

3. The sort-control field for each type of report record is as follows:

   a. Report 01 - Transaction Input

      1) Columns 131-132 = Report No. = "01"

      2) Column 133 = Input type = "T" or "S"

      3) Columns 134-135 = Input Ident.

      4) Column 136 = Trans Code

      5) Columns 137-141 = Check Number (T08 records only)

      6) Columns 142-155 = blank

b. Report 02 - General Ledger

1) Columns 131-132 = Report No. = "02"

2) Columns 133-135 = Account Number

3) Columns 136-147 = Year-Contract-Fund-Cost Center

4) Columns 148-149 = Input Ident.

5) Columns 150-155 = blank

c. Report 03 - General Ledger Transactions

1) Columns 131-132 = Report No. = "03"

2) Columns 133-135 = Account Number

3) Columns 136-147 = Year-Contract-Fund-Cost Center

4) Columns 148-149 = Input Ident.

5) Columns 150-155 = blank.

d. Report 04 = Management Reports

1) Columns 131-132 = Report No. = "04"

2) Columns 133-134 = Year

3) Columns 135-138 = Contract

4) Columns 139-141 = Fund

5) Column 142 = Cost Center ID - SEE NOTE BELOW

6) Columns 143-145 = Cost Center

7) Columns 146-148 = Account Number

8) Column 149 = Input type

9) Columns 150-151 = Input ID

10) Column 152 = Trans Code

11) Columns 153-155 = blank

NOTE: If the cost center is 900, place a ZERO "0" in this field, otherwise place a "1" in this field.

e. Report 05 = Payable Input

1) Columns 131-132 = Report No. = "05"

2) Columns 133-138 = Vendor Number

3) Columns 139-144 = Invoice Date = Year, Month, Day

4) Columns 145-155 = Blank

f. Report 06 = Payable Cost Distribution

1) Columns 131-132 = Report No. = "06"

2) Columns 133-134 = Year

3) Columns 135-138 = Contract

4) Columns 139-141 = Fund

5) Columns 142-144 = Cost Center

6) Columns 145-147 = Account Number

7) Columns 148-155 = blank

g. Report 07 = Payable Account Distribution

1) Columns 131-132 = Report No. = "07"

2) Columns 133-134 = Account Number

3) Columns 135-136 = Year

4) Columns 137-140 = Contract

5) Columns 141-143 = Fund

6) Columns 144-146 = Cost Center

7) Columns 147-153 = Check Number

8) Columns 154-155 = blank

h. Report 08 = Payable Payment Register

1) Columns 131-132 = Report No. = "08"

2) Columns 133-138 = Check Number

3) Columns 139-144 = Vendor Number

4) Columns 145-155 = blank

i. Report 09 = Y-T-D Open Commitment

1) Columns 131-132 = Report No. = "09"

2) Columns 133-138 = Year-Contract

3) Columns 139-144 = P.O. No./Encumb. No.

4) Columns 145-150 = Vendor Number

5) Columns 151-155 = blank

4. Additional Programming Considerations:

In any instance where the prior year obligation is paid in the current year (Open Y-T-D Commitment), the generation of the Management Report Record (Report 04) is the same as the current year. However, in generating the General Ledger Record, the account number is not taken from the Control Field (columns 17-19) but from the Liability Acct. Field (columns 71-73) of the T08 Record. For current year obligations that are paid in the current year, the account number is taken from the Control Field (columns 17-19).